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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,324	01/22/2002	Neal J. Miller	Miller 01-01	8874

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STEPHEN A GRATTON  
THE LAW OFFICE OF STEVE GRATTON  
2764 SOUTH BRAUN WAY  
LAKEWOOD, CO 80228

EXAMINER

COOLEY, CHARLES E

ART UNIT PAPER NUMBER

1723

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/051,324

Applicant(s)

MILLER ET AL.

Examiner

Charles E. Cooley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## OFFICE ACTION

1. This application has been assigned to Technology Center 1700, Art Unit 1723 and the following will apply for this application:

a. Please direct all written correspondence with the correct application serial number for this application to Art Unit 1723.

b. Telephone inquiries regarding this application should be directed to the Technology Center 1700 receptionist at ☎(703) 308-0651 or to the Examiner at ☎(703) 308-0112. Official facsimile correspondence filed before a final office action should be transmitted to ☎(703) 872-9306. Official facsimile correspondence which responds to a final office action should be transmitted to ☎(703) 872-9306.

### ***Information Disclosure Statement***

2. Note the attached PTO-1449 form submitted with the Information Disclosure Statement filed 22 JAN 2002.

### ***Specification***

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

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4. The disclosure is objected to because of the following informalities:
  - a. Page 1: the status of the parent application should be updated as being abandoned.

Correction is required.

5. The abstract and title are acceptable.

***Claim Rejections - 35 U.S.C. § 112, second paragraph***

6. Claims 20-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20, line 4: "the catch tank" lacks antecedent basis.

Claim 22 appears to be incomplete and lacks proper ending punctuation.

7. Each pending claim should be thoroughly reviewed such that these and any other informalities are corrected so the claims may particularly point out and distinctly claim the subject matter which applicant regards as the invention, as required by 35 U.S.C. § 112, second paragraph.

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***Claim Rejections - 35 U.S.C. § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3, 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18, 22, 23, 24, 25, 27, 28, 29, 30, 31, and 32 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998.

This article clearly discloses a system and method for separating a mixture using a centrifuge with a fuzzy logic control means including the step of providing a centrifuge being disclosed on pages 2-3 and in Fig. 1; the fuzzy logic controller and its functions are disclosed on page 3; the heating, pumping, separating, conveying, and sensing steps are disclosed on page 2; the providing a set of rules is disclosed on pages 2-3; and adjusting the feed temperature and feed rate using the fuzzy logic controller and set of rules is disclosed on pages 3-5 and in Figure 4.

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10. Claims 1, 3, 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18, 22, 23, 24, 25, 27, 28, 29, 30, 31, and 32 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by the article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" dated August 1998.

This article clearly discloses a system and method for separating a mixture using a centrifuge with a fuzzy logic control means including the step of providing a centrifuge being disclosed on page 2 and in Figs. 1-2; the fuzzy logic controller and its functions are disclosed on page 2; the heating, pumping, separating, conveying, and sensing steps are disclosed on page 2; the providing a set of rules is disclosed on pages 3-4; and adjusting the feed temperature and feed rate using the fuzzy logic controller and set of rules is disclosed on pages 4 and in Figure 5.

11. Claims 1-19 and 22-32 are rejected under 35 U.S.C. § 102(a) as being clearly anticipated by the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001.

This document clearly discloses the claimed subject matter, particularly at pages 23-118 and 349-351. The filter is disclosed beginning at page 54. The feed forward controller is disclosed beginning at page 66. The fuzzy soft sensor is disclosed beginning at page 80. The conflict resolution portion is disclosed beginning at page 111.

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***Claim Rejections - 35 U.S.C. § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 20-21 and 33-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998, or the article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" dated August 1998, or the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001 in view of Davis (US 5,499,586).

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The article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998, the article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" dated August 1998, and the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001 each disclose the collecting tank but do not disclose the vapor recovery system. Davis discloses a vapor recovery system for use in the Chemical Processing Industry comprising a vapor recovery unit 18 with a fan and baffles 120. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the systems and methods disclosed by the above prior art with a vapor recovery system as taught by Davis for the purpose of recovering substances from the exhaust gases formed during the processing of the materials (col. 6, line 37 through col. 7, line 12).

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Charles Cooley whose telephone number is ☎ (703) 308-0112.



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17. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (703) 308-0651.

Dated: 24 September 2003



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**Charles Cooley**  
**Primary Examiner**  
**Art Unit 1723**